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LEADING ARTICLES

LATE VIEWS ON SOME CONSTITUTIONAL DISEASES.

R. B. H. GRADWOHL, M. D.

ST. LOUIS.

Uric acid "diathesis," gout and diabetes mellitus are three conditions which are intensely interesting to our profession, mainly because of the elusiveness of their etiological factor in escaping close inspection and accurate study, and, naturally, on account of the consequent lack of success in applying specific remedial agents. We do not intend to maintain that success in therapeusis is only to be had by absolute knowledge of etiology and pathology; many times, in fact, notably in the cases of quinine in malaria and mercury in syphilis, specific medication was used for years before the true nature of these diseases was understood, yet the apparent tendency of therapeusis of the future seems to be "synthetic" rather than "analytic," a building up of medication on a solid foundation of etiology and pathology. And so we have become accustomed to thinking of finding a "cure" of these conditions because some of the mystery and gloom that has encompassed their true etiology and pathology has been in a measure dispelled by scientific investigation. So far attempts at medicating these diseases have been barren of results.

These diseases have become veritable *betes noires* for those who are reaching out for the millenium of successful drug therapy; they have driven many out of sheer desperation born of repeated drug failures into the ranks of the nihilists from the very ranks of devout therapeutists. But recently physiological chemists and pathologists have contributed some definite information with regard to these troubles where before all was darkness and chaos. Definite knowledge on these subjects has been at a premium for a long time. Speculation has been rife. Theories have abounded, with no facts to bear them out.

A long time ago, Garrod demonstrated that the blood of gouty subjects contained an abnormally high quantity of uric acid. This was a great advance in internal medicine. Although the analytic methods available at that time were far from faultless, yet the main point of his research has been completely verified, notably by Magnus-Levy, who found from three to six milligrams of uric acid per hundred cubic centimeters of blood in gout, normal blood containing at the most but doubtful traces of uric acid. Within recent years improvements in the technique of analytic chemistry have greatly helped in the study of uric acid metabolism in health and disease, and we have learned particularly that the several stages in the production of uric acid from its original source, the nucleoproteins, are accomplished only through the successive actions of several distinct intracellular enzymes.

A few years ago Dr. Frank Billings, in an interesting paper that appeared in the Journal of the American Medical Association for October 12, 1901, spoke of the "Uric Acid Fallacies" that prevailed up to that time. He weighed the question from all sides and summed up his conclusions in a concise manner, first stating what was true with respect to the uric acid question, viewed in the light of the knowledge prior to 1901, and secondly, what was not true, viewed in the same light and weighed in the balance of calm, dispassionate judgment. We will quote Billings' conclusions as representing the world's opinion up to 1901, and will then continue with our review of what has been accomplished since then. Billings said, among other things, that uric acid does not exist in the blood in health, yet this is disputed by many modern authorities, in line with our previous statement that Garrod's

dictum of the presence of minute traces in the blood had been verified by Magnus-Levy. Abeles has also claimed that it is present in normal blood. Monkowki and Klemperer were unable to demonstrate it in the blood of healthy persons. This diversity in result is brought to be due to the fact that normally, the uric acid is in loose combination with some other purin product which consequently prevents its precipitation with the usual reagents. Minkowski holds that it is combined with the purin-base, nucleotin-phosphoric acid, and that it is in this form that uric acid circulates in the blood. Others think that it is in combination with one of the pyramidin derivatives of nuclein, namely, thymic acid. Billings further said that uric acid is probably formed in the kidney from two sources: (a) from urea interacting with some antecedent of urea, probably glycogen, in the kidney, the large amount of uric acid excreted by birds and reptiles and the presence in the blood of some animals of urea and not uric acid points rationally to this source of uric acid in these animals, and it is reasonably certain by inference that a part at least of the uric acid excreted by mammals, including man, is formed in the kidney in this way; (b) from the nucleins of the body, by oxidation, probably in the kidneys. Moreover, Billings said that uric acid is not poisonous; that the presence of uric acid in the blood as the quadriurate or biurate probably means that it has been absorbed from the kidneys, that defective kidneys are the cause of this accumulation; that antecedent kidney disease is commonly present in the so-called lithemic states which have often been attributed to the irritating effects of uric acid, especially upon the kidney capillaries and the cells of the tubules, that the lesions formerly attributed to uric acid are probably due to the toxic effect of the alloxuric bases; that the presence of these lesions in the kidneys and in the connective tissue elements of the body lead not only to accumulation of urates in the blood, but also furnish a proper condition of tissue for the deposition of the urates as concretions in joints and fibrous tissues; that the degree of alkalinity of the blood has no influence upon the presence of the urates in the blood; that the deposited biurate concretions cannot be re-dissolved out of the joints by the use of alkaline medication; that the presence of the urate concretions in the body comprises the sum total of its pathological effects; that the so-called uric acid diathesis—the influence of heredity, bad habits of life, alcoholic indulgence, lead poisoning, etc.—consists in a condition or tendency to disintegrate a quantity of nuclein far in excess of the amount usually split up, with resulting increase of uric acid or alloxuric base formation; that the condition of the urine as to the presence of uric acid in a single specimen is not an indication of the blood state in relation to the presence of the urates; that the chemic reaction of the urine bears no relation to the presence of uric acid in the urine and blood, nor does it indicate the chemic reaction of the blood. These are the arrant fallacies of the uric acid devotees, according to Billings: uric acid is a toxin; that it is a causative factor in any disease except gout; that uric aciduria meaning "acid blood" states exist; that the chemical reaction of the blood may be altered by the use of alkaline substances or by diet; that uratic deposits may be dissolved out by the administration of alkalines; that lithia is a uric acid solvent of unusually high potency; that uric acid is an abnormal constituent of the urine; that an excess of uric acid in the urine at one time or a deficiency at another time indicates an abnormal condition in reference to uric acid, and finally, that rheumatism is due to uric acid.

This summing up by Billings rather upset many preconceived notions about this condition. It represented the opinion of a very careful clinician, and his words are entitled to the fullest consideration. Since that time, however, much more light has been thrown on this question, illuminating some of the dark places and rather upsetting Billings' as well as the opinions of others who have written on uric acid in the past few decades. Schittenhelm and Brugsch have followed up the work of Jones, Partridge and Winternitz on the influence of the action of specific ferments and enzymes on chemical transformations in the body, applying their efforts particularly to the study of gout, using both human and animal material. In a recent publication by them, in the Zeitschrift für experimentale Patholoige und Pharacologie, 1907, iv, 438, they assert that the blood of patients with typical gout contains a demonstrable quantity of uric acid, even when the food has been free for purins for weeks and months, while blood from normal persons who are living on a purin-free diet contains no uric acid at all. There is consequently a disturbance of metabolism in gout to such an extent that the endogenous purins, arising from the nucleoprotein of the tissues cannot be destroyed or eliminated from the blood in the usual way. Accumulation of uric acid in the blood therefore depends upon two things: first, defective uric acid lysis in the person's tissues, and secondly, failure of elimination on the part of the kidneys. This latter possibility

is hardly sufficient to explain this undue amount of uric acid in the blood in gout, for were it dependent upon faulty elimination through defective kidneys, it would show arise instead of remaining stationary at a constant level.

A proper appreciation of this recent work cannot be had unless we understand something about uric acid metabolism under normal condition. Uric acid has the empirical formula $C_5H_4N_4O_3$, and the rational formula HN-CO OC—HN N—C—N=CH. The generally accepted view is that it is derived partly from nuclein resulting from the disintegration of cell nuclei and partly from the hypoxanthin, which is produced as a result of muscle metabolism. Other nitrogenous products are known to be derived from nuclein, notably xanthin, hypoxanthin, guanin and adenin, as well as six others of complicated structure. These were designated by Kossel and Kruger as alloxuric bodies because they were made up of a combination of an alloxan and urea nucleus. Fischer found that a number of them could be prepared synthetically. These were derived from a compound which he called "purin," having a carbon-nitrogen nucleus. Uric acid is partly trioxypurin. The alloxuric or purin bodies include uric acid together with their other bases. Horbaczeswski found that by the addition of an oxydizing substance like fresh blood to macerated spleen pulp, he obtained a certain amount of uric aicd, provided heat was used. If only heat was used and no oxydizing agent added, only nuclein or xanthic bases were obtained. In other words, the production of uric acid depended upon the facilities afforded by oxidation.

The purin bodies from which uric acid is mainly, if not entirely, derived come from two sources. Burian and Schur designate them as the "exogenous" and the "endogenous" purins. Exogenous purins are those introduced with food, while endogenous purins are derived from the nucleins already in the body, coming as we have already stated, from muscle metabolism. Burian in 1905 showed that muscle purins are the source of endogenous uric acid. Burian and Schur gave data showed the total amount and source of uric acid daily formed in man, but did not include in their figures the entire amount of nuclein formed in the body, i.e., that part transformed by specific enzymes in the liver and other organs and excreted as urea or intermediate bodies, such as allantion. Of the total purin bodies of the urine, nine-tenths is excreted as uric acid, and one-tenth as the xanthin or purin bases.

Jones and others have demonstrated that the various glands and tissues of the body contain specific ferments which are necessary for the conversion of one xanthin base into another, and for the conversion of xanthin base into uric acid. Jones showed that digestion of the thymus gland in the presence of an antiseptic produces xanthin; by autodigestion of the spleen, guanin and hypoxanthin are formed. When these glands are boiled with mineral acids, other results are obtained, guanin and adenina lone appearing; these changes are due to the presence of specific intracellular ferments which possess the power, under varying physical conditions, of acting upon certain parts of the purin bodies, converting them into related product.

Schittelhelm obtained from extracts of the spleen, liver, lungs and muscle an oxidizing ferment which he termed oxidase, possessing the power of transforming purin bases quantitatively into uric acid. Others have found that another enzyme, nuclease, liberates purin base from their combination as a part of tissue nucleoproteids. There are four distinct enzymes, termed nuclease, guanase, adenase and oxidase, which are responsible for uric acid in the body. Schittelhelm further found another enzyme, contained in the kidneys, liver, muscle and bone-marrow, which could oxidize and destroy uric acid, converting it into urea and other bodies. This discovery bears a direct relationship to the work previously mentioned by this investigator and Brugsch. It also strikingly controverts one of the so-called "fallacies" which Billings called attention to, in this way; alcohol does injury by inhibiting the activity of the uric acid destroying enzyme, and anything that inhibits the activity of the enzyme allows uric acid to form in excess by calling forth the latent activity of the uric acid producing enymes. The work of Schittelhelm and Brugsch shows clearly the distinction between what has been known as the two forms of gout, the one a primary arthritic and the other a primary renal gout. These two investigators would limit the term "gouty diathesis" to the condition of uric acidemia persisting with a purin free diet, which must always be present in order that typical gouty attacks may occur, but which may exist for an indefinite period without typical acute attacks. Over-saturation of the blood with uric acid is not necessary in order to have the deposition of uric acid in the cartilage of the joints, as has been the universal assumption. Almagia maintained, and his work has been absolutely confirmed by Brugsch and Schittelhelm, that cartilage has a peculiar affinity for uric acid and urates, and, by some phys-

ical absorption process, it can extract these substances from dilute solutions and cause their precipitation within the tissues. Uric acid long present in the blood of the gouty furnishes just the proper conditions for the accumulation and precipitation in cartilaginous tissues. Ordinarily in nephritis the retention of uric acid is too brief to permit its precipitation in the tissues, but in those occasional cases of chronic interstitial nephritis in which there is a protracted retention of uric acid, the anatomic results are the same as when the uricacidemia is due to metabolic deficiency, for in either case uric acid will accumulate and precipitate in the same tissues with exactly the same results, namely, acute attacks of gout.

This recent work entirely contradicts those who but a few years ago, would have completely overthrown the old-fashioned idea that there is no such thing as uric acid diathesis, uricacidemia or any connection between uric acid in the system and attacks of gout. What Billings and others in 1901 derided as "uric acid fallacies" are apparently facts, backed up by exact chemical and physiologial experiments. We must continue to uphold the doctrine first advocated by Murchison, in part at least in an insistence upon calling certain symptoms and effects "uricacidemia." While the latest opinion does not agree in all particulars with Murchison's original idea that the uric acid diathesis was due to a functional disturbance in the liver, nevertheless the symptom-complex so designated by him must continue to be so-called and recognized. Bouchard contends that the so-called lithiasis has little or nothing to do with the disturbance in the function of the liver. It is here impossible to give the full pathology of uricacidemia, beyond the consideration which we have already given to the fate of the nucleoproteins in the body. We can only state as end results that certain symptoms arise in connection with defective food or tissue metabolism, more particularly of the nitrogenous elements. Deficient oxidation is probably the most essential factor in this process, with the result of the formation of less readily soluble and less readily eliminated products of retrograde metamorphosis. The faulty metabolism if drawn out may lead to gout, with uratic deposits in the joint, and acute inflammation, with arterial and renal diseases added thereto. In a large group of these cases, the disturbed metabolism produces high tension in the arteries (probably as a direct sequence of interference with the capillary circulation) and ultimately, degenerations of various tissues, particularly the scleroses.

Over-eating and over-drinking, when combined with deficient muscular exercies, are at the bottom of this nutritional disturbance. This is not a "fallacy," but a fact. The symptoms of the uric acid diathesis are motley, ill-defined and all of them do not occur in any one case. They are distinctive only when viewed collectively. The cases occur in members of gouty families who may never themselves suffered from the acute disease, and in persons who have lived not wisely but too well, who have eaten and drunk too freely, lived sedentary lives, and yet have been fortunate enough to escape an acute attack of actual gout. They suffer from "irregular gout" however, and this affection may be summed up as follows (Osler):

(a) Cutaneous Eruptions.—Garrod and others have called attention to the frequent association of eczema with the gouty habit. The French in particular insist upon the special liability of gouty persons to skin affections, the arthritides, as they call them.

(b) Gastro-Intestinal Disorders.—Attacks of that is termed biliousness, in which the tongue is furred, the breath foul, the bowels constipated, and the action of the liver torpid, are not uncommon in such cases.

(c) Cardio-vascular Symptoms.—With the lithemia, arterio-sclerosis is frequently associated. The blood tension becomes high and cardiac and renal symptoms soon develop, with dropsy and albuminuria. The cardiac manifestations consist essentially in those dependent upon failure of the left ventricle to hypertrophy, when we have palpitation, irregular action, and ultimately a condition of assystole. The manifestations may be entirely vascular, with thrombosis of the coronary arteries, followed by death.

(d) Nervous Manifestations.—Headache is the most common symptom of the so-called uric acid diathesis. Haig called special attention to the association of this symptom with the accumulation of uric acid in the system. Neuralgias may also develop, with sciatica and paresthesias. Duckworth laid special emphasis upon a common gouty manifestation which usually occurs in the uric acid diathesis, namely, hot or itching feet at nihgt. In Plutarch one will find that Strabo called this symptom "the lisping of the gout." Cramps in the legs also occur.

(e) Urinary Disorders.—The urine is highly colored and highly acid and on standing may deposit crystals of lithic acid. Transient and temporary increase in this ingredient regarded as serious. There are at times what are termed "uric acid showers" when the amount of this substance is markedly increased. Oxaluria may also be present. In

some of these cases there may be noted actual attacks of urpethritis, from the irritation of the oxalates.

Such is the uric diathesis. It exists and thrives and today the up-to-date physician must recognize it and fight it right valiantly in order to keep his patient comfortable and well. The treatment may be divided into the hygienic, the dietetic and the medicinal. These patients should be taught to live temperately, exercise moderately, eat moderately, and above all, to abstain from alcohol. Let the lithemic patient strictly obey Gabriel D'Annunzio's injunction, "Let us go out into the sunshine." Exercise, life in the open, regular hours, promotion of the activity of the skin and bowels; these are the things that bring rapid results.

In respect to diet there is as much difference of opinion among different authorities as there is strife among the "seven ancient cities which warred for the privilege of being the birth-place of Homer; seven cities through which, too, the living Homer begged his bread." Certain it is that where there is so much difference of opinion experience must have proved that one rigid diet will not suffice for every patient. While in the main, meats, "red" meats particularly, and vegetables containing nitrogenous element, are to be tabooed, still each case is a law unto itself, and we must ascertain just how each case responds to each particular dietary. There should be no excess in starchy or saccharine foods. Lastly, we come to the medicinal treatment of this condition. This is, possibly, the most important of all considerations, for we have learned that the disease depends upon essentially faulty metabolic functionation, upon faulty evolution of the nucleo-proteins. It is not Utopian to hope that some remedial agent may yet be found which will correct this faulty metabolism and restore the blood and the individual to this proper balance. This medication must also be active enough to eliminate the accumulated mass of uric acid from the system. Many agents have been lauded to the skies as "uric acid" solvents and eliminants, yet the daily history of repeated drug failures in this condition sets at naught all such claims.

DIABETES MELLITUS.

This is a curious, ergo, a very interesting disease A consideration of some of the latest views on diabetes will not be amiss right here. "It is a disorder of carbohydrate and fat metabolism usually characterized by progressive loss of weight, thirst and polyuria, and by the persistent excretion of glucose in the urine while the individual is on a diet containing only moderate amounts of carbohydrates, or in certain instance, even when no carbohydrates are ingested." The disease was first designated by Aretaeus, about 150 A. D. who used the term diabetes, meaning "a syphon." The disease is on the increase in the United States It is not necessary here to go into all the factors of race, heredity, etc., pertaining to diabetes. Suffice it to state that one of the most curious features about the recent finding with respect to it is the probability of its contagiousness. These are the so-called "conjugal diabetes, where a husband suffering with diabetes evidently transmits it to his wife, or vice versa. The work of Opie, of Johns Hopkins University, published in 1900, upon the etiology of diabetes with respect to changes in the islands of Langerhans in the pancreas opened up a new field of inquiry and led to further investigation of this disease.

These islands of Langerhans are composed of columns of cells having no communication with the ducts of the pancreatic gland, aside from an intimate relation with a rich capillary net-work. Opie maintained that in diabetes of pancreatic origin there were definite changes in these islands of Langerhans and others have advanced the thought that in all cases there are changes in this situation, changes that are functional and ultra-microscopic. The recent work of Otto Cohnheim leads to the opinion that all the cases of endogenous diabetes, that is, cases exhibiting no attributable exciting cause, and without evident pathological lesions, are due to organic or functional disease in the islands of Langerhans.

In an article entitled "Hypertrophy of the Islands of Langerhans in Diabetes Mellitus," published in the American Journal of the Medical Science, 1907, page 432, W. G. MacCallum states that since Opie's and Sobolew's work on these islands, the role of these tissue elements in diabetes mellitus has been variously interpreted according to the pathological changes found therein. These changes consist in the main of degeneration and sclerosis, in which stands of cells composing the islands are replaced by hyaline-pink staining material. Hansemann of Berlin thinks that the lesions in the pancreas are of little importance in the causation of diabetes mellitus and lays more stress upon changes occurring in the pancreatic tissue in general. He claims that there is a type of granular atrophy of the pancreas which he has described which occupies the chief place in the pathologic anatomy of the disease. Sauerbeck in a review of the literature points out that there are many cases in

which no such changes in the pancreas are found, and in which the causative factor in the diabetes must be extra-pancreatic. MacCallum reports an interesting case in his practice in which hypertrophy of the islands of Langerhans was present, and thinks that it was compensatory in nature, even though it was finally insufficient to avert death.

Most modern observers who have systematically investigated the islands of Langerhans in diabetes have either accepted the view that there is a causal relationship between the disease and lesions of the islands, or have suspended judgment until further evidence is available. We must bear in mind von Noorden's insistence upon the fact that scientific medicine has long been so under the influence of morbid anatomy that it is often difficult to realize that important disturbances of function may occur when microscopical examination reveals no distinctive pathological change.

Without entering too deeply into a differentiation of the various forms of diabetes, we will simply call attention to the method of handling such cases. The matter of the absolute identification and classification of each case met within practice, whether it is liver diabetes, or pancreatic diabetes, or simply glycosuria from changes in the central nervous system, does not concern us here.

Treatment.—Treatment of these cases embodies the use of a proper dietary and the use of medicinal agents of acknowledged merit. The discussion that has rent and racked the pathological world in regard to the true etiology of diabetes has extended even to those who delve into problems of clinical medicine, for is there not a wide difference of opinion concerning the proper dietetic treatment of this disease? This difference of opinion is divergent, extending from the belief of those who insist upon an absolute sugar, starch-free regimen to those who openly advocate potatoes in unlimited quantities. And even "conservatives" have to acknowledge that the matter of proper diet in diabetes is one calculated to bring premature gray hairs to the head of the medical attendant before he gets his patient into that happy state called "equilibrium." This discordant note in the medical dietetic symphony is brought about possibly by the difficulty that has been the lot of the medical profession in finding some drug or group of drugs that influence the carbohydrate metabolism. No extracts of the pancreas or other organs have been found to be productive of definite good in this direction.

The treatment of diabetes calls for a remedy which will establish a carbohydrate tolerance that is most propitious for the patient's well-being and recovery of health. Besides, it is necessary to maintain nutrition, to control the hyperglycemia and to prevent acidosis. One caution is to be observed in the handling of these cases; fatty meats are important for the diabetic; they sometimes cause diarrhea, but will not do so ordinarily if alcohol is administered with them, as alcohol helps to get rid of the large amounts of fat; patients who refuse to take alcohol have continual trouble with the fats. Do not be satisfied with a small quantity of sugar in the urine. Remove the sugar absolutely from the urine. A small percentage of sugar satisfies some doctors, but it surely invites trouble. Co-operation between patient and doctor is necessary. The chief obstacle to this desideratium is a psychical one, not a physical. The doctor may be indolent or ignorant, the patient may be self-indulgent. So give the patient the why and wherefore for demanding of him a life of irksome watchfulness and self-restraint. Teach your diabetic the same general rules of hygiene that are taught other patients with similar constitutional disorders, open air, as much sunshine as possible, moderate exercise, proper action of the skin and bowels. See that the eliminative organs are keyed to the top-notch, and you will have splendid results. You may diet your patient down to the finest point but you will not succeed in making him feel well unless you help him to eliminate his excrementitious material from his system. The one point that is to be emphasized with respect to diabetes, and it holds good of other diseases as well—is to use every means and agent in your power to bring down the percentage of sugar, and to maintain the patient's nutrition. In medicine specifics are few and far between; no one procedure or remedy can do all. You must diet your patient, you must give him water, and you must give him medicines.

Something should be said regarding the dietetic treatment of diabetes. Instead of blindly pinning your faith to one of the so-called diabetic dietaries, you must first estimate the carbohydrate tolerance and then arrange your dietary accordingly. Janeway in a recent article in the American Journal of the Medical Sciences gives the most common-sense and thoroughly rational argument yet advanced on the dietetic aspects of the diabetic medication. He says among other things that the fault with most dietaries for diabetes has been that they have not been clearly set forth in our English text-books, that these diets have been arranged for the German stomach by German investigators,

and are quite unsuited for our American habits and tastes.

Janeway, in this connection suggests certain tables of diet, in the way of a "test diet" of ample fuel value, containing at least thirty-five calories per kilogram of body weight, made up practically of protein and fat. This furnishes us an admirable means of building up a proper dietary for each patient. The tables are as follows:

Breakfast.—Coffee with one and a half ounces cream; two eggs cooked with one-half ounce butter; three ounces ham.

Luncheon—Bouillon with one raw egg; three ounces sirloin steak, chicken, or leg of lamb. One ounce bacon; vegetables from this list, two tablespoons, with half ounce butter: Asparagus, beet greens, Brussels sprouts, cabbage, cauliflower, celery, chicory, cresses, cucumbers, egg plant, endive, lettuce, mushrooms, radishes, rhubarb, salsify, spinach, string beans, tomatoes, vegetable marrow. Dessert made with one egg and one and half ounces cream, six ounces of wine or one ounce or brandy.

Afternoon tea with one-half ounce cream.

Dinner.—Any clear soup; three ounces fish (salmon, shad or mackerel) with one-half ounce of butter; one quarter pound roast pork, beef, mutton, turkey or lamb chop. Vegetables from above list, two tablespoonfuls with one-half ounce butter, salad with one-half ounce olive oil in dressing; one ounce cheese—English, pineapple, Swiss or full cream; six ounces wine, or one ounce whisky or brandy. Demitasse of coffee. To this test diet definite quantities of white bread are added, and then gradually reduced until the urine becomes sugar-free. In this way tolerance for carbohydrates may be established and the dietary thereafter kept just at the right point. Severe cases, however, where the urine does not become sugar-free within one week, require different treatment. Such cases require restriction in the protein-intake. Naunyn and others have shown that glycosuria is increased by a large consumption of protein. A test table, for such severe cases, on restricted protein, would be about as follows:

Breakfast.—Coffee with one and one-half ounces of cream; two eggs with one-half ounce butter; one ounce bacon.

Luncheon.—Two eggs; one ounce bacon; two ounces lamb chops (1), ham (2), beef steak (3), chicken (4), or fish (5) broiled with one-half ounce butter. (Each day select with the same number for luncheon and dinner.) Vegetable from list, two tablespoonfuls, with one-half ounce butter. Dessert made with one egg and one and one-half ounces cream; six ounces wine and one ounce whiskey or brandy.

Afternoon tea with one half ounce cream.

Dinner.—Any clear soup; one-fourth pound roast pork (5), beef (4), mutton (3), turkey (2), chicken (1). Vegetables from list, two tablespoonfuls with one-half ounce butter. Salad with one-half ounce olive oil in dressing; one ounce cream cheese, six ounces wine or one ounce whiskey or brandy. Demitasse coffee. If, with such a restricted diet of protein, the glycosuria fades away, then it is according to von Noorden, a case of moderately severe diabetes. If, however, sugar still appears in the urine, in spite of the use of eliminates, it is a more severe type. In such cases tests for acetone bodies should be constantly made and if present in any amount, sodium bicarbonate, one-fourth to one ounce daily, should be given during the entire period.

The amount of diacetic acid and acetone should be regularly estimated in diabetic cases. For acetone, use Legal's test, which is as follows:

A small quantity of the urine, two centimetres, is treated with a few drops of a freshly made and somewhat concentrated solution of sodum nitro-prusside, and with a moderately strong solution of violet-red on the addition of a little acetic acid. In the absence of acetone, the purple-red tint does not form on the addition of acid. For diacetic acid, use the simple ferric chloride test of Gerhardt, controlled by Arnold's which is subject to less confusion with other substances.

Gerhardt's Test for Diacetic Acid.—1. Treat ten cubic centimeters of the suspected urine with a solution of perchlorid of iron, which should be added drop by drop. The addition of the iron solution may cause a precipitation of phosphates, which sediment is removed by filtration. Treat the filtrate further with iron solution, and should diacetic acid be present, a Burgundy-red color develops, which may deepen to a dark-brown.

2. Boil a second quantity of the urine and treat as in the case of No. 1. In the event of no reaction taking place, proceed as follows:

3. Place ten cubic centimeters of the urine in a test tube; add a small quantity of sulphuric acid, and extract with ether. Treat this ethereal extract with the perchlorid of iron as outlined above, when the red color will develop.

Upon standing for twenty-four hours the red color will be seen to fade, and eventually to disappear, should such color be due to the

presence of diacetic acid, "if acetone is present at the same time" (von Jaksch).

The control by Arnold's test is as follows:

Reagents necessary: (a) a solution of paramido-aceto-phenone; dissolve one gram in 100 cubic centimeters of distilled water. Add to the solution hydrochloric acid, one drop at a time, until the yellow color disappears, care being taken that no more hydrochloric acid be added than is absolutely necesasry to cause a colorless solution. (b) A solution of sodium nitrite (1 per cent).

Method.—1. At the time of use place 6 c.c. of solution (a) in a test tube, and to it add 3 c.c. of solution (b).

2. Add an equal volume of filtered urine (filter highly colored urine through animal charcoal) and follow with a few drops of ammonia.

3. With this solution, normal urine will be found to show a variable degree of color, which becomes brown or brownish red after the mixture is thoroughly shaken. In the presence of diacetic acid a reddish brown amorphous precipitate collects at the bottom of the fluid after the tube has been allowed to stand for a short time.

4 Place 1 c.c. of the supernatant colored liquid in a dish, and to it add 10 c.c. of concentrated hydrochloric acid. Diacetic acid when present in appreciable amount causes a purplish-violet color.

An indirect method of ascertaining the degree of acidosis is by the determination of the ammonia content of the urine.

A simple method of estimating ammonia in the urine, suitable for clinical purposes, is that described by G. C. Mathison in the British Medical Journal for March 20, 1099. Normally about 3 per cent, in disease as much as 50 per cent of the nitrogen excreted in the urine is in the form of ammonia. In the condition known as acidosis the formation of acid products, such as aceto-acetic acid and beta-oxybutyric acid in intermediary metabolism, necessitates the utilization of ammonia to effect their neutralization. The the presence and amount of ammonia in the urine gives an estimate of the existence and extent of metabolic perversion. To estimate the amount of organic acids is extremely difficult, but since they are in combination with ammonia, the estimation of this body will afford information as to the quantity of these acids present. It is only large quantitative changes in the ammonia ingredient that are clinically significant. The methods commonly employed for this estimation are too elaborate or too inaccurate for clinical purpose. Folin's method is not without its sources of error. Malfatti has recently shown a method that is admirable for clinical use; it is simple and rapid, requires no special apparatus, gives consistent results and possesses a sufficient degree of accuracy. The method depends upon the reaction that takes place when a solution of an ammonium salt is treated with formaldehyd. Combination occurs between the formaldehyde and ammonia with the formation of urotropine. The acids previously combined with the ammonia is liberated, and can be titrated. The procedure can be carried out as follows: Twenty-five centimeters of urine are measured with a pipette into a conical flask of about 250 cm. capacity, and diluted with 50 cm. of distilled water. Four drops of a 1 per cent acloholic solution of phenolphthalein are added, and decinormal sodium hydrate is run in from a burette, until a definite pink color is attained that does not disappear on shaking. The number of cubic centimeters of decinormal sodium hydrate added gives the acidity of the urine. About 5 cm. of commercial formalin that have been neutralized before hand by adding an equal volume of water, a drop of phenolphthalein solution and sufficient decinormal soda solution to produce a pink tinge, are now added to the urine. The pink color at once disappears, since the acids previouly present and combined with the ammonia have been liberated. More decinormal soda solution is added until the pink color disappear. The amount of sodium hydrate is chemically equivalent to the ammonia previously present as ammonium salts, now in combination as urotropine. The amount of nitrogen present as ammonia in twenty-four hours' urine can readily be estimated, since 1 cm. of decinormal soda is equal to 0.0017 gram of ammonia—that is, to 0.0014 gram of nitrogen. Dr. Mathison has further simplified this method by adding to the urine 15 grams of powdered neutral potassium oxalate and shaking for two minutes before titrating; the end point of the reaction is made sharper, partly owing to the precipitation of calcium, partly to a dimunition of the influence of the ammonium salts, both calcium and ammonium salts having a disturbing influence on the end point of the first titration.

A general examination of the patient is always necessary. Watch his weight constantly. Inspect the tongue and note the odor of the breath. Heart and vessels, lungs, digestive organs, kidneys, skin and nervous reactions, and eyes, should be systematically examined with the complications of the disease ever in mind.

THE diagnosis of tuberculosis and cancer will make better progress when family history is utterly ignored.—Amer. Jour. of Surg.

DIAGNOSIS OF DISEASES OF THE SIGMOID FLEXURE.

EDWIN WALKER, M. D.

EVANSVILLE, IND.

Our knowledge of diseases of the digestive system has probably advanced more rapidly than that of any other part of the body. Ulcer and cancer of the stomach, gall-stones and appendicitis have been so thoroughly elucidated, that they are now rarely overlooked. The medical mind grasped the clinical pictures of these affections. If we could relieve our minds of the vagaries, misinterpretations of constipation and obstruction we would take another great stride forward. The diagnosis of torpid liver, constipation, fecal impaction or biliousness and their treatment by purgatives has sent many a poor sufferer to the happy hunting-ground, who could have been saved by an early operation for volvulus, stricture or cancer.

Constipation is but a symptom, and to treat it successfully the lesion causing it must be determined. The treatment of this symptom with drugs does more harm, obscured more cases than anything else. The routine use of purgatives by the profession is a shame and disgrace, and many a cure is due to the fact that the patient deserts his doctor and these drugs are abandoned. A patient suffering with some gastro-intestinal trouble consults doctor after doctor and receives cathartics from all; he is not relieved; the faith doctor stops the purgatives and he recovers. Purgatives are only useful in a very, very limited sphere, yet they are given for almost everything. Even the surgeon cannot remove an ingrowing toe-nail without a preliminary dose of castor oil. With but few exceptions, the exhibition of a purgative before any operation, even on the digestive tract, is superfluous, and in many cases absolutely harmful. For four years I have omitted the "usual purge" before a surgical operation and my patients have done better and have been more comfortable. Is there any sufficient reason for the routine exhibition in surgical cases? Impaction is rare and if present, could not be removed by a single purge. While it is not my purpose to discuss constipation, a few words will make more clear its relation to the diseases of the sigmoid flexure, for they are often mistaken and treated for constipation at the beginning.

Constipation is best divided into atonic, spastic and obstructive. The atonic is due to the weakened tone of the intestinal musculature, and its most common causes are, irregular habit, lack of exercise, improper diet, especially the exclusion of coarser articles of diet and the abuse of laxatives. This form occurs more frequently in women and men of sedentary habits, but is by no means confined to them. The history is like this, no habit is formed as to time of defecation; when the desire comes, it is put off for duty or convenience, the diet consists of those articles, meat, eggs and bread, which leave little to pass off; soon the bowels fail to act for two or three days, the doctor or friend is ready with the omnipresent laxative to remedy the trouble. The bowels are moved and the same thing recurs until the bowels are pauperized and fail to help themselves, preferring to rely on artificial aid. Other factors like a lacerated perineum, splanchnoptosis and other affections enter into many cases, but the vast majority are of the class detailed.

The correction lies in education, a return to proper habits and diet and eschewing cathartics.

In spastic constipation there is a contraction of the muscular coats of the colon. It is more common in nervous patients, and is nearly always due to excessive use of purgatives, and on account of colicy pains and the small caliber of the feces, it is sometimes mistaken for organic disease. Stop your purgatives, prohibit cold drink, acid and raw fruits, give a little belladonna and in a short time your patient is well.

The obstructive constipation is due to some mechanical interference with the passage of the feces and its remedy is mechanical or surgical.

After this long preamble I want to call your attention to some of the lesions of the sigmoid which cause partial or complete obstruction, or other troubles which may be mistaken for constipation or other mild derangements. The sigmoid flexure begins at the termination of the descending colon at the crest of the ileum at the outer border of the left psoas muscle and ends at the third sacral vertebra. It is S or omega shaped. "It passes downward to within a short distance of Poupart's ligament, then from left to right until near the median line where it drops into the pelvis, passes to the opposite side and then upward until it emerges from the right pelvic brim where it makes a sudden turn and passes backwards and down to become continuous with the rectum at the middle of the sacrum" (Gant). At this point there is a distinct increase of circular muscular fibers which is called the sphincter of O'Beirne. You will observe the relation of the sigmoid with pelvic organs is such that impaction or disease may be easily mistaken for lesions of them. In examining the cul-

de-sac of Douglas, if any thing abnormal is found, the sigmoid should be carefully examined internally. It is not an uncommon error to mistake impaction for disease of the tubes or ovaries. It is the narrowest part of the large intestine; the average length is 17½ inches, but varies (Byron Robinson) from 5 to 33 inches. It has a mesentery which is short at the beginning and end but long in the middle portion; the length varies greatly in different individuals.

The three coats are the same as the remainder of the colon, except the longitudinal bands spread out and are lost at the lower end. The sigmoid is the reservoir for holding the fecal matter until defecation. In every case of suspected disease of the intestines, the sigmoid should be examined. Palpation will reveal enlargements, or impaction, and by digital and bimanual examination the size, shape and position can be determined. It is sometimes of service to inflate the bowel with air, and for this purpose I have found a bicycle pump attached to an ordinary rectal tube is best. The danger of rapid inflation, especially in diseased bowel, must be borne in mind; ruptures have been recorded. It would be a good plan to palpate the sigmoid in all cases to familiarize yourself with the normal; you will in some cases be surprised at the size and consistence of the normal sigmoid. Inspection by the sigmoidoscope will reveal impaction, ulcer, strictures or tumors. The simple metal tube with a forehead reflector is best. The patient should be placed in the knee-chest position and the instrument introduced and directed forward; then the handle depressed and pushed toward the promontory of the sacrum, then the handle elevated and the point again directed forward, which it will pass into the sigmoid.

The feces should be carefully observed also. Blood, if present, is usually fresh, and is mixed with the actions; scybala indicate impaction, feces with small caliber indicate spastic constipation or stricture. If careful investigation be made along these lines disease of the sigmoid will be early diagnosed. Fecal impaction is more frequent in the cecum, transverse colon, sigmoid and rectum. In my own experience it has been more frequent in the sigmoid and it may gain enormous size, especially if a stricture coexists. It is usually a round, doughy mass and can be indented on palpation; it is more movable than a tumor and it can be seen through the proctoscope. The subjects are usually sallow but not cachectic. The symptoms of impaction come on suddenly as a rule and are not preceded by pain, hemorrhage, or mucus or jelly-like stools we find in cacinoma. The patient complains of frequent desire for stool, but the small amount passed is hard, does not afford relief and gas collects above, causing griping pains. The practitioner rarely overlooks a fecal impaction, on the contrary the more often falls into error by mistaking a tumor for this condition. Fecal impaction is not nearly so common as is generally supposed. Enemas of olive or cotton-seed oil have been most satisfactory in my hand to relieve this condition.

Intussusception of the sigmoid, while rare, should be borne in mind; the symptoms are similar to dysentery and it can be seen by the proctoscope, and my be mistaken for a tumor. It rarely produces complete obstruction and can be replaced by emptying the impaction which usually causes it and filling the rectum and sigmoid with fluid. Ulceration is detected by the presence of blood, mucus and pus in the stools, and if tubercular, the bacilli can be found. Through the sigmoidoscope they can be inpsected and treated.

Fitz found volvulus the cause of obstruction in 42 cases out of 295. It is more common in the sigmoid than any other portion of the intestines. It may be partial or complete. When the twist is partial the symptoms are those of partial obstruction. The bowels are moved with difficulty, giving partial relief, then the symptoms of pain, tenesmus, accumulation of gas and vomiting again recur, thus continuing until it is either relieved by complete emptying of the gut or complete obstruction ensues. Complete volvulus comes on suddenly with violent pain and tenesmus, mucus with more or less blood is passed, vomiting is severe, tympany begins in left groin and may be confined to that region, collapse sets in early; the whole aspect of the case is grave, it may terminate in death in a few hours, but usually occurs in from three to six days. The location of the pain, the tympany more in the left side, with grave appearance of the facies are fairly diagnostic; the rectum should be cautiously filled with fluid, which causes great pain and only a small amount can be injected; the proctocope or bougie is arrested at the volvulus.

Early operation it indicated to release the twist, by attaching the gut to the abdominal wall, or by resection recurrence is prevented.

The conditions most frequently overlooked are rare stricture and malignant disease, they are too often regarded as constipation until the disease is far advanced or an acute obstruction develops. Thus the favorable time for surgical relief is lost. Operations for acute ileus ensuing a chronic, partial stenosis have a very high mortality and the

conditions do not in most cases allow a complete operation, while in the case of malignant disease, the extension to glands and neighboring organs renders complete removal practically impossible. In stricture we usually have a history of preceding ulcerative disease. There is constipation and impaction alternated by attacks of diarrhoea, colicy and bearing-down pains, frequent desire to go to stool with the passage of mucus and at times some blood. If the stricture is low it can be inspected. Bougies are inferior to the sigmoidocsope and are rarely used.

Carcinoma presents the same symptoms and may be an ingrafted stricture a large proportion of which become malignant. In addition to the symptoms of stricture, a tumor can be felt which is usually irregular or multiple, is hard, not movable or only slightly so. It can often be seen projecting into the gut. It comes on slowly in patients past middle life, cachexia develops early; the discharges are profuse, mucus, blood, pus and jelly-like with very offensive odor. It is very painful and in spite of all care and treatment the condition gradually grows worse.

If one is on their guard, strictures and malignant growths may be early diagnosed before the patient is weakened or marked obstruction supervenes. At this period a radical operation can be safely done and complete recovery ensues.

LOCAL applications of tincture of iodine is one of the most satisfactory treatments for small chronic ulcers.—Amer. Jour. of Surg.

NATIONAL PURITY CONGRESS.—The fifth annual congress of the National Purity Federation will be held in Burlington, Iowa, October 18-22. The officers of the association are: President, B. S Steadwell, Lacrosse, Wis.; vice-presidents, Dr. Howard A. Kelly, Baltimore, and Hon. Ben. B. Lindsey, Denver; corresponding secretary, Miss Julia E. Morrow, 104 Ralph street, Spokane, Wash., and treasurer, Charles A. Mitchell, Cherokee, Okla. The object of the congress is to secure the co-operation of all societies, national, state and local, that are considering the promotion of purity in the life of the individual and in social relations, and inaugurating a forward movement to arouse the conscience of the people to organized vice and the operations of its promoters, and assure to all a high standard of morality and a right knowledge of the pure life. A general invitation is extended to all interested in the cause, and organizations are requested to send delegates to the congress.

CLINICAL LECTURE.

PARESTHESIA.

JOHN V. SHOEMAKER, M. D., LL.D.

PHILADELPHIA.

Professor of Materia Medica, Therapeutics, Clinical Medicine and Diseases of the Skin in the Medico-Chirurgical College and Hospital.

GENTLEMEN:—This young woman confronts us with a disease which is characterized by increased sensitiveness of the cutaneous surface of her body. This is a very important symptom since it represents both a functional and organic derangement of the nervous centres. Sometimes this increased sensitiveness appears to be idiopathic, such as in dermatalgia.

The patient is twenty-one years old, nativity America, and is a dressmaker by occupation. Her history is entirely negative as regards this disease. Nothing abnormal can be revealed by physical examination.

Symptoms.—The skin of this patient is covered with superficial linear wounds scattered here and there which is due to her scratching. Her skin is also erythematous and rough. She states that she experiences a sensation as though small insects were crawling in and through her skin. This sensation has necessarily brought about an intense desire to scratch and rub her skin, and in order to accomplish this she was compelled to undress herself a number of times to see whether there were any insects on her skin. She also states that she had to awake at night a number of times to see if there were any insects on her body irritating her skin. This annoyance caused here intense suffering, until at the present time she is almost exhausted. Sometimes she scratches the irritating parts so much and hard that the sensibility for a time is deadened, and then she feels a great deal better.

The parts affected in this patient are the inner portion of the limbs, the anus, labia and vagina. She has no lesions present on her skin except abrasions here and there produced by her sharp finger-nails. She also states that she has pain over her left ovary.

Diagnosis.—The diagnosis of the disease in this patient is not difficult. However we must exercise great care in order that our diagnosis should be correct, since many of the sensations experienced are similar to those of other diseases of the skin.

From the absence of any characteristic eruption, the erythematous and roughened skin, here and there abrasions, lymph-papules and superficial linear wounds we can at once diagnose this affection as paresthesia.

Sometimes it is exceedingly difficult to diagnose this affection when it is complicated by eczema or dermatitis. In such cases the diagnosis must depend upon the history and the subjective symptoms described by the patient.

Often pediculosis of the body may be confounded with paresthesia.

The differential diagnostic points are: In pediculosis we find the cause or pediculi; there are also observed small hemorrhagic specks which are attributed to the sucking out of the blood by the pediculi, while in paresthesia there are no parasites present upon the skin.

Pathology.—This affection is usually due to a functional or organic derangement of the nerve centres and the nerves supplying the affected portions of the body. It may be associated with organic changes in the body, but as a general rule no structural change can be detected.

Etiology.—The cause of this patient's trouble is, as we suspect, uterine and neurasthenia. It is attributed to a functional and organic derangement of the nervous system, debility, anemia, excesses of all kinds and physiological changes that may occur at certain periods. In some patients it is caused by visceral and digestive disorders, such as diarrhea, intestinal worms, constipation and hemorrhoids, while in others it is caused by the use and injection of certain foods and drugs.

In certain individuals it appears generally in winter, due to the atmospheric changes. It may appear during any season of the year and at any age, but it is more common in middle and advanced life.

Rheumatism and gout are predisposing factors. The other causes to which it may be attributed in the female are, pregnancy, excesses, leucorrhea, vulvitis, uterine polypi, boils, amenorrhea and dysmenorrhea. In the male it may be caused by an enlarged prostate, urinary calculi, excesses, gonorrhea and condylomata.

Treatment—Find the cause and eliminate it. The treatment of paresthesia depends mainly upon the cause, which should first be removed, if that be possible. Constitutional and local treatment are both required until all evidence of the irritation shall have disappeared.

External treatment is of the greatest benefit, both to afford relief from the intolerable irritation and to combine with internal medication to affect a cure.

Since neurasthenia is probably the only active cause of this patient's trouble, hence we will place her on the following combination:

℞ Extracti valeratis.....
Extracti sumbulis.....
Asafoetidae.....aa gr. xx
Ferri lactatis..... gr. xxx
Aloini..... gr. ii
Arseni trioxidi..... gr. $\frac{2}{5}$
Extracti gentianae..... 3ss
Misce. Fiant capsulae No. xx.
Signa. One capsule four times daily.

Externally. In order to lessen the irritated condition of her skin, we will prescribe the following solution:

℞ Magnesii carbonatis 3ss
Creosoti f.3ss
Liquoris calcis..... f.3iii
Glycerini..... f.3i
Aquae hamamelidis....q.s.ad f.3vi
Misce. Signa. Shake well and apply as directed.

I think that she will obtain relief from electricity, due to its stimulation, sedative and tonic effects. It influences both directly and indirectly, through the reflex action of the nerves of the heart.

For her ovarian trouble we will refer her to the gynecological department of the hospital.

Prognosis.—The prognosis in this case is favorable since the cause is functional and the case is not severe. The cure therefore depends upon proper treatment and co operation of the patient.

A Punishment Fitting the Crime.—Abdul Hamid, the deposed Sultan of Turkey, is reported to have been sent into retirement with eleven wives.

During July and August the Medical Era of St. Louis, Mo., will issue its annual series of issues devoted to gastro-intestinal diseases. The July number will take up the usual bowel disorders of hot weather and the August number will be devoted entirely to typhoid fever. These issues always attract considerable attention. The editor will forward copies to physicians applying for same.

Boston is planning a Tercentennial Exposition to commemorate the Landing of the Pilgrims in that city in the year 1920. This early announcement has been deemed necessary in order that the world shall know that the United States reserves the year 1920 for a World's Fair, and that Boston and New England will give the intervening years to plans and preparations for an exposition on a scale and magnitude commensurate with the importance of the event, which was the birth of the American nation.

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Edited By
DR. THOS. A. HOPKINS

And the Following Associates:
JOHN McH. DEAN, M. D., Surgery.
ROBT. H. DAVIS, M. D., Dermatology.
W. E. FISCHER, M. D., Ophthalmology.
R. B. H. GRADWOHL, M. D., Pathology.
A. F. KOETTER, M. D., Oto-Laryngology.
O. E. LADEMANN, M. D., Internal Medicine.
W. H. VOGT, M. D., Gynecology.
O. H. BROWN, M. D., Tuberculosis.

Editorial Rooms, Suite 319-321 Century Building, St Louis.

EDITORIAL

Attendance at Atlantic City.

AT the time of writing we have been unable to learn just how large an attendance St. Louis is having at the meeting of the A. M. A., but we have every reason to believe that it is considerably smaller than it should be considering the interesting programs offered and the attractiveness of every phase of the gathering. We are more and more convinced as the years pass that the great association might well consider shifting the time of meeting to a season which would make attendance easier. Early June is the time of busy practice; it is too early for the summer vacation which many would like to combine with attendance on this meeting; then it follows too closely on the heels of an absence from home which has been occasioned by attendance at the State meeting. It is our belief that a July or an August meeting would show a tremendously greater attendance, and the objection that the heat would interfere with scientific deliberations is open to question. The American people throughout the country have demonstrated for many summers that they can gather and do splendidly effective scientific work August after August and week after week while doing it, and return home not alone mentally refreshed and invigorated but with the evidences of physicial rest and relaxation plain to be seen; this is the history of the Chautauquas, and it is not confined to the open air gatherings. Are physicians so different from the rest of mankind that they need fear July or August weather? The subject of the untimeliness of our Association's meeting is not an indifferent one to the members who make up the large majority of the body, and it should not be an indifferent one to the leaders. It has been suggested that the leaders are largely men who make a business of the Association's work and that the present timing of the meeting has been in a measure determined by their desire that its work shall not interfere with their vacations. We can hardly believe that this has had any particular weight in the matter, though we are willing to concede that it may have had. The meeting should be so placed that it will be convenient for the larger number, and we are convinced that were it placed for the last week of July the attendance at the experimental first meeting would distinctly justify the change. Of course the Association would hardly select New Orleans as a meeting place for a midsummer meeting, though it is questionable whether, did they do so, we would feel the heat more than we did when meeting there in May. This is the day of the electric fan and of ice water, and it is possible to be fairly comfortable in almost any section at almost any season. A registration of from 3500 to 5000 is not enough, and more members should find their way to these meetings; if it is made possible to combine the meeting with the summer's vacation trip they will be there.

After-thoughts on the State Meeting.

THE time of our going to press and the meeting of the State Medical Association were so nearly identical that only a hurried report of the meeting was gotten into our last issue and several omissions are to be accounted for for this reason. We should have mentioned two re-elections which were merited, and for which the membership has reason to feel satisfaction. The retaining of Dr. McAlester as secretary, aud Dr. Welch as treasurer, was among the right things of the meeting. We also neglected to mention the section elections, which resulted as follows:

The Surgical Section chose for its officers Dr. Willard Bartlett, chairman, and Dr. Louis Rassieur, secretary, both of St. Louis. The Medical Section elected Dr. Franklin E. Murphy, of Kansas City, chairman, and Dr. W. R. Patterson, of Tipton, secretary. The Eye, Ear, Nose and Throat Section elected Dr. John Green, Jr., St. Louis, chairman, and Dr. Clarence Loeb, of St. Louis, secretary.

Councillors.—15th District, J. I. Anderson, Warrensburg; 22d, W. S. Hutton, Fornfelt; 26th, H. Breuer, St. James; 28th, A. H. Madry, Aurora; 29th, R. L. Neff, Joplin.

The Committee on Public Policy and Legislation.—R. M Funkhouser, St. Louis;

M. B. Overholser, Harrisonville; C. R. Dudley, Hannibal.

St. Louis was well represented at the meeting, there being almost one hundred members from the St. Louis Medical Society in attendance. The two new delegates to the American Medical Association are both from St. Louis, namely, Drs. W. B. Dorsett and E. J. Goodwin.

Advertising by Physicians.

We are accustomed to think of the advertising physician as the quack, and have been interestedly entertained by a scholarly article by Dr. Jos. Grindon of this city,* in which we find the subject thoughtfully presented, and some phases emphasized which had escaped our notice. Dr. Grindon holds that practically all physicians advertise; the real question is, what is the proper in the way of advertising and what is not. He reviews the letter of the law in the codes of ethics, and divides advertisement, or notices to the public, into five classes: 1. Those which are uncondemned, such as modest signs and cards with simply the doctor's name and hours, not promiscuously distributed. 2. Those not condemned by the Principles of Ethics and in use in some communities, but avoided by some. They consist of simple business card inserted in lay publication, and are now virtually obsolete among English-speaking metropolitan phyicians. 3. The method not specifically condemned by the Principle of Ethics, but manifestly in contravention to its spirit, and therefore universally deprecated by worthy physicians. They are included in the general condemnation "of the other methods of charlatans." Such are the distribution of cards on the street, the use of the showy sign, and the distribution of medical reprints to laymen or prospective patients. 4. Advertisements veiled in form, oftenest consisting of accounts of cures, operations, alleged discoveries, etc., ostensibly written by reporters but really furnished by the physician himself, either verbatim or in substance. These are condemned as the most vicious of all kinds of advertisements and in this connection Grindon discusses at some length the subject of contributions by physicians on medical subjects to the lay press. These are usually of one of three kinds: 1. Those giving advice. If the advice given is such as every patient would easily obtain from his regular adviser, it is open to grave suspicion, while on the other hand, if it is a sort that will be of real value to the public and such as the reader would not be likely to obtain from his personal adviser, it might be altogether commendable. This is especially the case if the contribution is from one who can speak with authority and who is above any suspicion of sordid motives. The second class of such contributions, the purely scientific ones, are unobjectionable unless so written as to direct attention to the writer rather than to the subject matter. Articles falling within the third class, namely, those discussing the diagnosis or treatment of cases which have become notorious or which affect eminent persons, will, as a rule, deserve the censure of the judicious. The discussion, if proper at all, should be confined to the medical journals. Expressed opinion as to the mental condition of persons accused of crimes come in the same class, and still another debatable form of publicity is that of the antemortem biographic notice, often with a portrait, in bound collections of sketches of distinguished citizens, or in the Sunday issues of city papers. If its appearance was contingent on the payment of a fee, direct or indirect, its unworthy characters is not debatable. 5. Last among the classes of advertisements by physicians, using the term loosely, are the flagrant, undisguised, paid-for advertisements, and these are not discussed. The term advertisement, Grindon says, has been used by him in a rather restricted sense, namely, that of reading matter of some sort, addressed to the public. There are other ways of advertising but he did not wish to make the subject too extensive. He has also left untouched the matter of advertisement of the physician's learning and skill, addressed to and intended for the profession. The subject is a difficult one but the medical profession is better able to take care of itself than is the laity. To sum up, he concludes that any notice or advertisement of any kind sent out by a physician seeking to obtain an unfair advantage for himself, or that compromises his dignity, is an objectionable advertisement, and the greater the pains taken to conceal its true character the worse it is.

* Jour. A. M. A., May 29.

The McCormack Meeting.

Dr. J. N. McCormack's recent visit in St. Louis taught those of the local profession who were somewhat in doubt as to his mission, that he is indeed the apostle of things medical "as they ought to be." In his intercourse with physicians and in his address peace, good will, harmony, helpfulness, progress, just oozed from him,

and it is to hoped that his endeavors will have resulted in our lasting betterment. We have so much and so perfect organization here in St. Louis that the reason for a visit from the National Organizer seemed open to question, but we have learned that Dr. McCormack is interested in following up organization and perfecting it in unity, and we certainly need unity.

The doctor's address was delivered in a conversational style, which was at first surprising, but shortly determined itself as more telling in its effect than a more oratorical effort might have been. He told us facts, facts which we know but do not heed, facts which should be so often brought to our attention that we will of necessity see the error of our way. That the Golden Rule should be operative in the medical profession, that each man should be concerned in the general uplift of the profession, that cliques and clans and all other petty divisions of the great body should give way to the one great work toward progress is easy to grant, but difficult to put into operation. Missouri is some way away from that plane of heavenly calm which appears to be in existence in Kentucky. According to report Kentucky has grown so tame that she will feed out of a child's hand, and it must be good to see; we hope there is no exaggeration for example's sake. Be that as it may, we believe in all that Dr. McCormack advanced as the ideal along these lines, and we can wish the Kentucky and Missouri professions nothing better than that spirit which he advocated.

ST. LOUIS ITEMS.

Dr. R. M. Funkhouser and family left St. Louis on the 6th for Europe, where they will spend the summer.

Dr. L. C. Boisliniere has been made medical director of Mount St. Rose Hospital for tubercular patients, vice Dr. Wm. Porter, whose connection with the State sanatorium has necessitated his resignation.

The A. M. A. Invited to Meet in St. Louis.—At the May 29th meeting of the St. Louis Medical Society it was voted without dissent to invite the American Medical Association to hold its 1910 meeting in St. Louis. The society has the interested cooperation of the Business Men's League in extending this invitation, and it believed that its acceptance is certain, and that the various details of its carrying out can be managed to the credit of our society and St. Louis and to the entire satisfaction of the A.M.A.

The St. Louis Society of Veterinary Inspectors, an organization composed of inspectors stationed in this city by the United States Board of Animal Industry, will hereafter meet in the council room of the St. Louis Medical Society on the second Monday of each month.

Dr. R. B. H. Gradwohl, who is in attendance at the meeting of the A. M. A., will visit Boston before his return. While in Boston he will investigate the medico-legal system of Massachusetts, which has replaced the coroner's system in that Commonwealth. Dr. Gradwohl will report his findings to the local Medico-Legal Society on his return.

Memorial Meeting.—The inauguration by the St. Louis Medical Society of an annual memorial day for deceased members on May 30th demonstrated itself as a wise move for the society. The attendance was good and the members and friends present were convinced that it should be a permanent institution. Some question of its being permanently fixed on the last Sunday in May was expressed; this day is so filled with other duties and obligations, and usually comes at the time just between the two great medical meetings, many who would gladly be present find it impossible to show the interest they feel. It has been suggested that the observance should be held on the last Sunday in December, at the close of the year. The subject is open to discussion and further action.

New Internes.—A new service of internes in the city hospitals began their duties on June 1st, the machinery of these institutions is so well arranged that this change is effected with no decidedly evident interruption of the work being done. The reappointmet of Dr. C. H. Shutt as assistant superintendent of the City Hospital for two years meets with the approval of the profession and his associates. The new internes are Drs. Hogan, Wrlucki, Bellaire, Weiss, Weintraub, Vernor, Taylor, Sewing, Von Schrader, Quade, Myers, McGinnis, Long, Lincoln, Langan, Kleinschmidt, Chilton, Brookes, Thompson, Barrow, Qualls, Dees and Pugh. The retiring internes who were appointed as senior physicians to the City Hospital were Drs. Ellis Fischel, Rolla Henry, G. E. Hertel, C. W. Gaerter, A. H. Jungle and W. H. Hewitt.

The pain in tubercular ureteritis is recurrent (violent ureteral peristalsis accompanied by uretentis. The pain may be due to occlusion of the ureter by blood clots or from the peristalsis of an inflamed ureter.—Byron Robinson.

MEDICAL PROGRESS

Comprising the Regular Contributions of the Fortnightly Department Staff.

SURGERY.

C. W. HEPBURN, M. D.

The Surgical Treatment of Tetanus.—In the American Journal of Clinical Medicine for April, 1909, Dr. Wilber Fisk Sterman asserts that there is no proper medical treatment of tetanus. He claims that the medical treatment of this disease has ever stood and stands today a signal failure, and that it is a strictly surgical disease from inoculation to recovery. He calls special attention to a neglected factor in the disease, namely, the peculiar gas formation with the toxin. This gas gradually accumulates in the space around the cerebrospinal meninges, irritating the coverings, parietal and visceral (the dura and pia mater) increasing the pressure and exaggerated reflexes, and trismus, with general nerves storms, is the inevitable result. A harmless operation, releasing the gas, will give immediate relief and permanent cure in 90 to 98 per cent of the most virulent cases, and aided by proper sustenance and cautious medical treatment, may mark the figures even higher, when timely and properly done. With general anesthesia, or with hyoscine and morphine to surgical degree, with proper aseptic and antiseptic preparatory care, a flap is raised posteriorly over the line of the longitudinal fissure, a quarter-inch trephine is used, the gas escapes with a hissing sound, and the patient awakes with a full and appreciative sense that he has been rescued from a horrible and untimely death. The button is left out, the flap is stitched to its place with the interrupted or a running suture of silk or chromicized gut, a moist dressing applied, kept moist for three days in order to allow any residual accumulative gas to escape, then dressed dry and treated thereafter as any other surgical, operative wound. The author's experimental work in this form of treatment was made upon horses. A horse may be very dangerous in the violent throes of tetanic convulsions, but when the skull is opened, and the gas escapes with a hiss, the horse quickly regains his feet, and soon nickers for something to eat and soon eats it, and the trouble is ended then and there. With a horse all that is required is an ordinary gimlet and the nerve to use it, and the author sees no reason why our human subjects need not expect the same relief.

A Case of Spontaneous Fracture Due to Thyroid Metastases.—Dr. Thomas F. Muller presents a preliminary report of a case of the above in Physician and Surgeon for December, 1908. The patient, a woman aged 71 years, had an ununited fracture of the lower third of the left femur, which had been treated as an uncomplicated injury for six months without result. At age of 41 she developed a goitre, which ceased to grow in size after seven years and caused no noticeable disturbance. An examination of the limb showed a deformity above the condyle of the left femur on the outer and anterior portion. This deformity was spindle-shaped, not of bony consistency, but somewhat harder than muscle. On the slightest movement to manipulation the most intense pain was evinced. There was also excessive mobility at the point of fracture with no attempt at repair. The clinical examination showed an entire absence of bone repair, with evidences of considerable osseous absorption. Because of the extreme agony which the patient suffered on the slightest movement or manipulation, the failure to heal, the evidence of the X-ray, and lastly because of certain facts pointing to probable malignancy, an operation was performed, at which there were no evidences anywhere of new formation of bone. The surfaces of the upper and lower fragments were hollowed out, the margin of the cup-shaped depression being thinned very much. The fracture line of the upper fragment was very pronounced, while the periosteum was apparently dissected upward for about three centimeters above the fracture. There was found a smaller piece of bone attached to the periosteum at this point. Between the fragments a very soft granulation tissue was found, which in connection with the upper fragment contained no lime salts. The limb was amputated at the junction of the middle and upper thirds. The patient made an uneventful, recovery. A microscopical examination of the tumor was made, and a diagnosis of thyroid metastases, locally malignant, was rendered.

The Modern Treatment of Tuberculosis of the Spine.—Dr. Robert W. Lovett, in Cleveland Medical Journal for February, 1909, says that spinal tuberculosis is a very much more amenable affection under efficient modern treatment than it formerly was. The death rate is far lower, abscesses and paralysis are much less frequently seen, the deformity should decrease and not increase during treatment, and the prognosis is not unfavorable. The three methods of treatment are: Treatment by simple recumbency; treatment by jackets and braces (the ambulatory), and treatment by jackets and braces combined with recumbency. The importance

of making outdoor life the accompaniment of whatever mechanical treatment is pursued is of primary importance and cannot be too strongly emphasized. Recumbency fulfills the mechanical demands by removing wholly superincumbent weight, making fixation easy, and not constricting the chest. Jackets and braces add to the efficiency of treatment by recumbency. Ambulatory jackets and braces fulfill but imperfectly the mechanical demands and must be recognized as means of treatment during the acute stage, secondary in efficiency to recumbency. Jackets and braces have their place in the treatment of all cases as soon as the acute stage is over and must in many instances constitute the sole treatment on account of circumstances of the patients.

Appendicitis in Pregnancy.—Dr. Everett O. Jones, in Northwest Medicine for January, 1909, says that a study of the literature shows that this disease is infrequent and does not necessarily produce abortion. The latter depends entirely on the form of the appendicitis. In two of three of the author's own cases cited in the paper it did not occur. As a result of appendicitis, three separate causes are active in leading to an interruption of pregnancy: First, the adhesions which form as the result of chronic appendicitis may extend to and cover the uterus and appendages and in a purely mechanical way hinder the growth of the pregnant uterus and so lead to abortion. Second, the extension by continuity of the suppurative process from the appendix to the pelvic organs. Third, the development of metastatic abscesses in the placenta and wall of the uterus through the veins of the right broad ligament. The diagnosis of appendicitis in the early months of pregnancy presents no peculiar difficulties, but as the uterus increases in size palpation of the cecum becomes more and more difficult. The prognosis of appendicitis arising during pregnancy is always a very grave one. The statistics collected by Boije show that the later in pregnancy the attack appears the graver the prognosis. Stahler's collection shows that, of 58 pregnant women operated on for appendicitis, 20 or 35 per cent died; of 46 cases not operated on 17 or 37 per cent died. In the face of such a frightful mortality decision in the question of treatment must always be a matter of serious responsibility. If ever the dictum to "operate as soon as one is sure of the diagnosis" is true, it is in this condition. The danger of infection of the placenta and walls of the uterus, and of general peritonitis is so great, that every effort should be made to operate before suppuration or abscess formation outside of the appendix has developed. The ideal treatment is preventive and to this end every pregnant woman who has catarrhal or recurrent appendicitis should be given the benefit of an interval operation. The most favorable time is the third or fourth month, as the uterus is not so large as to obstruct the operation, and the abdominal scar has time enough to become firm before labor sets in. In suppurative cases the best results will be attained by a short operation, through drainage, removal of the appendix when it can be accomplished without unduly prolonging the operation, and continuous saline irrigation by rectum. After abortion has occurred, as it will in a large proportion of these cases irrespective of the treatment followed, the rectal saline irrigation should be continued, and if symptoms of general peritonitis appear, ice be applied to the abdomen, food and drink withheld from the stomach and lavage used if vomiting be present.

Resection of the Elbow-Joint.—Dr. Thomas H. Hancock reports a case of resection of the elbow-joint in International Journal of Surgery, March, 1909, which shows what can be done in some cases which appear to be almost hopeless. The patient, a machinist, was injured by his arm being caught by belt and carried around a pulley. A set-screw caught the elbow-joint in passing and tore it open, completely disarticulating the bones and tearing off the ulna about three inches below the joint. The integument was torn from a point about two inches above the joint on the outside of the arm outward and downward across the joint, then upward and inward to within about three inches of the starting point. In the operation which was done, the articular surfaces were sawed off, the wound was sutured with silver wire, the arm and forearm were bandagd to an angular splint, and a carbolized solution was given with the directions that it be poured at frequent intervals over the wound, to which no dressing had been applied. The wound suppurated, but healed in two months. At this time the man can lift as much as he ever could and does his work as a machinist. The surgeon's object in removing the articular surfaces and putting the arm and forearm up at right angles was to prevent ankylosis where the bones had been sawed.

Immediate Operative Treatment of Certain Fractures.—In Surgery, Gynecology and Obstetrics for Feb., 1909, Dr. Leonard Freeman presents an able paper under the above caption. Operations for non-union in fractures, and for deformities resulting from faulty union, have been practiced for a long time; but it is only in recent years that attention has been given to the open treatment of recent fractures, doubtless owing to the

danger of infection. This danger, however, is minimized where the operations are clean ones, performed under the most favorable surroundings and by an experienced surgeon, a master of aseptic technic. In 33 cases of recent fractures operated upon by the author, 10 of which were compound and 23 simple, there was but one slight infection among the latter, which necessitated the removal of a wire, while among the former the septic difficulties encountered depended directly upon the contamination of the original wound. Opinions differ as to the proper time to operate upon recent fractures; whether it should be done at once or after a certain interval—say from 7 to 14 days. The advocates of delay claim that it is advantageous to wait until absorption has removed the grosser result of the injury, believing that the operation will then be easier and less dangerous. This reasoning seems, however, to be fallacious. It is probably better to operate as soon as possible, because the likelihood of infection is no greater, and the longer the delay the more the tissues contract and the harder it is to set the bones. In considering the operative treatment of recent fractures the author sets forth and amplifies nine separate propositions as requiring attention, gives his operative technic, and illustrates by cuts, a simple and effective clamp of his own devising.

Cholecystectomy vs. Cholecystotomy.—In an article in Medical Record for Feb. 13, 1909, Dr. John F. Erdmann quotes from a paper published by him three years ago: "That one can exist without a functionating gall-bladder is a well known fact, proved many times by the autopsy and operating-table findings. * * * Given this as a fact, when one has a case of cholecystitis, or disease of the gall-bladder in which time as a curative agent cannot be relied upon, or when the condition is a menace to life, our judgment should demand the removal of this organ." The author still adheres to this view in the main, but is not so radical now, for two reasons: First, a distinctly surgical one of convenience, in that if one is called upon to do a secondary operation one has lost, in the absence of the bladder, the anatomical landmark to the duct, and is compelled to do the most tedious and delicate adhesion dissection work conceivable, and second, that occasionally, when necessary to do a secondary operation upon other of the abdominal viscera or a secondary operation upon the duct, it has been observed that a pseudo gall-bladder is formed by a dilatation or diverticulum formation of the duct, disproving to a degree that we can all do without our gall-bladders or allied storehouses, for the excess of bile formed during intervals of digestion. The question of cholecystectomy and cholecystotomy very naturally arises chiefly in the cases of acute cholecystitis, and in a certain percentage only of chronic gall-bladder where upon opening the abdomen the gall-bladder is found atrophied or contracted, thickened with or without calareous degeneration, and when the cystic duct, by whatever means, has been occluded, resulting in a hydrops of the gall-bladder, while in cases of malignancy the question is, cholecystectomy, etc., or closure of the abdomen without interference. The author has a record of 25 cholecystotomies with no deaths, and 51 cholecystectomies with one death, or less than 2 per cent. The difference here is of really no value as a factor for consideration of the choice of cholecystotomy, he says, as the majority of the cholecystectomies were serious cases; while the cholecystotomies were done in practically each instance in a relatively clean case.

Lumbar Puncture in Otology.—In a contribution on this subject in New York Medical Journal for Dec. 19, 1908, Dr. Seymour Oppenheimer says that while in some obscure cases one may be enabled by lumbar puncture to determine the nature of the meningeal changes and to some extent their cause, by an analytical and bacteriological study of the cerebrospinal fluid, and thus obtain fuller information as to the advisability or not of operative procedures, it does not seem advisable that it should be employed indiscriminately in all cases of suspected intracranial complications from suppurative otitis, but its use for diagnostic purposes should be limited to such cases where serious doubt exists as to the presence or absence of purulent meningitis or tuberculosis of the meninges, and in which it is impossible to obtain a satisfactory diagnosis without its use. Its importance from a positive aspect is self-evident, for when the withdrawn fluid shows changes from the normal, varying in degree from marked turbidity, or possibly a purulent fluid, to that almost clear or but slightly altered, one can readily determine the nature of the intracranial changes and determine to a great extent the feasibility of operative procedures in the given case and, to a considerable degree, the prognosis. The negative evidence obtained by it also may possess great diagnostic value, for, as a rule, it indicates the absence of a meningitis of any extent, and thus eliminates this factor from the condition suspected to be present. As a therapeutic measure the majority of otologists believe that its usefulness is of but little

moment, and, while it may be admissible in such otitic cases as are accompanied with increased brain pressure, one is not enabled to find any positive indications for its employment except for diagnostic purposes. Although there is the possibility of added danger from its employment, yet it is trivial as compared with its value as a diagnostic agent in some instances, and, as it is readily performed, it should always be remembered as a valuable aid to the otologist.

BLOOD TRANSFUSION.—R. T. Frank and G. Baehr, New York (Jour. A. M. A., May 29), publish the results of further experiments with the use of a vascular bridge or link composed of a fresh animal blood vessel, first described by them some months ago (N. Y. Med. Jour. Nov. 28, 1908). They mention the difficulties of other methods and enumerate as the advantages afforded by the use of the bridge: (1) A sufficient length of vessel is obtained without extensive dissection of the artery of the donor or the vein of the recipient; (2) the link as now prepared by them has lost some of its elasticity and is well stretched so as to afford an unobstructed lumen within the cannulae and a technic familiar to every surgeon (from its similarity to that used in intravenous infusion). The links are prepared by cuffing dogs' carotids at both ends over Crile's tubes stretching them on a wire frame and fixing them for twenty-four hours in a 2 per cent solution of formalin. The formalin is removed by two changes of sterile salt solution (thirty to sixty minutes each) and the prepared pieces or links as they are called are permanently preserved in paraffin oil. Full details of the method of preparing these links are given also of the technic which closely resembles that so familiar in intravenous saline infusion, the infusion cannula being represented by the cuffed link. Tests were also made of the sterility, some of them rather severe, but no growth even when infected with Bacillus anthracoides, occurred after the tubes had been immersed in 2 per cent formalin over ten hours. Out of twenty-six experimental transfusions performed by means of these prepared links, but one failed and this was due to the kinking of the vessel during its preservation. These cases are tabulated. The authors say that, as far as can be predicted, the use of these links affords a simpler and easier method of transfusion than those hitherto described, and they hope that it may soon be tied on the human subject.

THE MEDICAL FORTNIGHTLY

A Cosmopolitan Biweekly for the General Practitioner

The Medical Fortnightly is devoted to the progress of the Practice and Science of Medicine and Surgery. Its aim is to present topics of interest and importance to physicians, and to this end, in addition to a well-selected corps of Department Editors, it has secured correspondents in the leading medical centers of Europe and America. Contributions of a scentific nature, and original in character, solicited. News of Societies, and of interesting medical topics, cordially invited.

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MEDICAL MISCELLANY

THE trustees of the Cleveland Homeopathic Hospital will make a strong fight against the injunction suit filed May 15 by certain homeopathic physicians to prevent the trustees from amendeing the charter in a way to allow the appointment of regular physicians to the hospital staff.

IT has been suggested that in performing lumbar puncture there exists some danger of drawing infectious material from the cranial cavity into the spinal canal in cases where the former is infected; that this may be a possibility it is impossible to deny, although in such instances no harm could arise further than that already present, as a purulent meningitis in itself would, in but a very short time, infect the spinal canal as a matter of course.—Oppenheimer.

It is the purpose of life which endows it with signification. The 1000 years of the giant turtle's life appears of minimum purpose and significance. The purpose of an Edison, a Macaroni, a Watts, a Bacon, a Franklin, a Lincoln is evident and made life worth living.—Byron Robinson.

The Asthma Plant of Queensland.—The euphorbias are very numerous in this colony; and among them is the euphorbias pilulifera, the "Queensland asthma plant," which has a remarkable reputation for curing this disease. Several pharmaceutical preparations of the plant are extensively sold in Australia. By analysis a green plant contains 79 per cent by weight of water and three per cent of ash, leaving 18 points of vegetable matter. A dried plant contained an alkaloidal substance equal to about one point in a thousand; it contained also a glucoside amounting to not more than four parts in the thousand, possibly one or both of these substances is the active principle.

Regulation of Sale of Opium in France.—The steady growth of the opium smoking habit in France, especially among naval officers, has led the government to issue a decree which is very troublesome to the pharmacists of that country, and has been severely criticised on account of its vagueness and uncertainty. This decree requires the keeping of a special register for every sale and purchase of the drug, although there is some doubt as to whether the small quantities dispensed as components of prescriptions must be registered. The fact that the loss in opium results from prolonged storage sometimes amounts to as much as 20 per cent, is also not considered in the decree. The pharmacists fear that this uncertainty may lead to annoyance by over-zealous police officers, and have entered a vigorous protest.

The Spanish Edition of the United States Pharmacopeia will bring new light to the Spanish speaking pharmacists and physicians in the territory adjacent to the United States. These Spanish countries have been in the habit of looking to France and Italy more particularly than to Spain for medical and pharmaceutical education and literature. Now, that the commercial relations of the United States with these countries is such that medicines of United States origin are finding their way into the countries, the Spanish translation of our Pharmacopeia will be diligently studied. The nature of the work and its high standing will undoubtedly command the respect, esteem and confidence of our Spanish-speaking neighbors.

The Missouri Association for the Relief and Control of Tuberculosis.—Following the annual meeting of the above-named body, held on the 28th ult., at which a full board of directors was elected, and other business transacted, the newly-chosen members met at the office of the Association in the Dolph building on June 3, and re-elected Dr. George Homan, president; Mr. R. J. Newton, secretary, and Mr. J. Hal Lynch, treasurer. A list of vice-presidents were named, and from each senatorial district in the State, an executive committee appointed, vacancies filled, and other business transacted. It is expected that a tuberculosis convention and exhibit will be held in connection with the St. Louis centennial celebration next October, comprising delegates from all the Southwestern territory, and a committee of fifteen on organization was named. It is their desire to unify and harmonize as completely as possible to this end the efforts of the State and Municipal health officials, the St. Louis Association for the Prevention and Control of Tuberculosis and, also, the St. Louis Tuberculosis Commission. As the last named body has ample funds, while the State Association is without adequate financial mean, it is hoped that a working arrangement can be effected for the advancement of this meritorious cause that will be satisfactory to all concerned. As the business, professional and educational interest of St. Louis will be promoted and the attractiveness of the occasion enhanced by such a convention and exhibition, and as business men control the said commission and the Business Men's League as well, it is the expectation that such a gathering will prove of substantial benefit in all respects.

Cough in Tuberculosis.—

℞ Codeinae sulphatis..... gr. iv
Acidi hydrochlorici dil.....fl. ℥ss
Spir. chloroformi.....fl. ℥iss
Syr. acidi citrici..... fl. ℥j
Aq.....q.s.ad fl. ℥iv

M. Sig.: A teaspoonful in water every two hours.

The following is recommended by D. E. Hughes:

℞ Morphinae sulphatis.....gr. iv
Ammonii et potassii tartratis aa gr. ij
Ammonii chloridi..... ij
Syr. glycyrrhizae.....q.s.ad fl. ℥iv

M. Sig.: A teaspoonful in water very four hours.—Jour. A.M.A.

LIST OF BACTERINS

(BACTERIAL VACCINES)

AND INDICATIONS FOR USE

Prepared according to methods of Sir Almoth E. Wright

Code Word (For telegraph orders)	The average doses are given. Lesser or greater doses may be secured by calculating that each minim contains one-sixteenth of the number of killed bacteria in each c.c.	
	Coli-Bacterin (B. Coli Vaccine) Cystitis; fistula in ano; catarrhal jaundice; local infections. Average dose, 5 to 50 millions.	
Impromptu	**No. 1.**—In packages of four 1 c.c. ampuls, each c.c. containing 50,000,000 killed bacteria, per package	$2 50
Jackdaw	**No. 2.**—In 20 c.c. vials, each c.c. containing 50,000,000 killed bacteria, per package	5 00
	Neisser-Bacterin (Gonococcic Vaccine) Gonorrhea; epididymitis, acute and chronic; gleet; gonorrheal conjunctivitis. prostatitis, rheumatism. Average dose, 10 to 100 millions.	
Inaffable	**No. 1.**—In packages of four 1 c.c. ampuls, each c.c. containing 50,000,000 killed bacteria. per package	2 50
Jacket	**No. 2.**—In packages of four 1 c.c. ampuls, each c.c. containing 500,000,000 killed bacteria, per package	5 00
Jacobin	**No. 3.**—In 20 c.c. vials, each c.c. containing 50,000,000 killed bacteria, per package	5 00
Jacksmith	**No. 4.**—In 20 c.c. vials. each c.c. containing 500,000,000 killed bacteria, per package	10 00
	Neoformans-Bacterin (Neoformans Vaccine) Tumors and cancerous conditions. Average dose, 50 to 100 millions.	
Inchant	**No. 1.**—In packages of four 1 c.c. ampuls, each c.c. containing 50,000,000 killed bacteria, per package	2 50
Jactancy	**No. 2.**—In 20 c.c. vials, each c.c. containing 50,000,000 killed bacteria, per package	5 00
	Pneumo-Bacterin (Pneumococcic Vaccine) Empyema; cystitis. Average dose, 10 to 50 millions.	
Inconstant	**No. 1.**—In packages of four 1 c.c. ampuls, each c.c. containing 50,000,000 killed bacteria, per package	2 50
Jaculate	**No. 2.**—In 20 c.c. vials, each c.c. containing 50,000,000 killed bacteria, per package	5 00
	Pyocyano-Bacterin (Pyocyaneus Vaccine) Local infections caused by this organism. Average dose, 5 to 50 millions.	
Indevout	**No. 1.**—In packages of four 1 c.c. ampuls, each c.c. containing 50,000,000 killed bacteria, per package	2 50
Jade	**No. 2.**—In 20 c.c. vials, each c.c. containing 50,000,000 killed bacteria, per package	5 00
	Staphylo-Bacterin (Staphylococcic Vaccine) Furunculosis, (*a*) acute, (*b*) chronic; acne; sycosis. Average dose, 50 to 500 millions.	
Inertia	**No. 1.**—In packages of four 1 c.c. ampuls, each c.c. containing 300,000,000 killed bacteria, per package	2 50
Jaggy	**No. 2.**—In packages of four 1 c.c. ampuls, each c.c. containing 1,000,000,000 killed bacteria, per package	5 00
Jailer	**No. 3.**—In 20 c.c. vials. each c.c. containing 300,000,000 killed bacteria, per package	5 00
Jamb	**No. 4.**—In 20 c.c. vials, each c.c. containing 1,000,000,000 killed bacteria, per package	10 00
	Strepto-Bacterin (Streptococcic Vaccine) Abscess; cystitis. Average dose, 10 to 50 millions.	
Inflate	**No. 1.**—In packages of four 1 c.c. ampuls, each c.c. containing 50,000,000 killed bacteria, per package	2 50
Jangle	**No. 2.**—In 20 c.c. vials, each c.c. containing 50,000,000 killed bacteria, per package	5 00
	Typho-Bacterin (Typhoid Vaccine) Indications: prevention and treatment of typhoid fever. Average dose, 5 to 50 millions.	
Inhuman	**No. 1.**—In packages of four 1 c.c. ampuls, each c.c. containing 50,000,000 killed bacteria, per package	2 50
Janitor	**No. 2.**—In 20 c.c. vials, each c.c. containing 50,000,000 killed bacteria, per package	5 00

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MEDICAL MEMORANDA.

Johann Hoff's Malt With Iron Easily Digested.—Its Pharmacological Action.—Powers of three different kinds are conveyed to the body by iron. First. Are those derived from its presence in all the tissues. Second. Those of appetite, digestion, strength, derived from its action or nutrition. Third. Those which arise from its formation of hemoglobin, without which neither the blood nor life itself would be possible The importance of iron is obvious; but it must be given in a digestible form.

The Therapeutics Action of Prunoids.—Prunoids produce their excellent therapeutic results by stimulating secretions, increasing the fluid content of the feces and only gently increasing peristalsis. They are extremely palatable, easily taken by even young children, and when brought in contact with the secretions rapidly disintegrate and produce their specific medicinal effect. Probably one of the most gratifying features of prunoids is what for lack of a better term may be called their remote effect. While prompt and decided catharsis follows their administration in six or eight hours, mild and salutary laxative influence is observed for several days after the final dose of prunoids. Other cathartic measures act just the reverse, and after their use the bowels invariably show greater lethargy and sluggishness.

Nervous Excitement.—In these strenuous times, when the mental functions are frequently taxed far beyond their powers of endurance, insomnia is only too common. Under these circumstances, Peacock's bromides will often prove the logical remedy. They do not compel sleep, like hypnotics; but, by allaying the existing nervous excitement, whether due to mental strain, worry or anxiety, they promote sleep in a normal manner. The patient awakens refreshed with a clear head, and does not suffer from unpleasant sequelae during the following day. The overstimulation of the cerebral functions from alcohol yields promptly to the soothing action of this preparation, which will often prove to be a stand-by in case of delirium tremens. In these patients in whom the commercial bromides should not be exhibited on account of their usual irritating action on the stomach already seriously effected, Peacock's bromides will fully meet the requirements.

Accuracy in Therapeutics.—The efficiency of a medicinal agent cannot be determined by mere physical appearance. Two specimens of fluid extract of digitalis, for example, may look precisely alike. One, upon administration, may exhibit a wholly satisfactory therapeutic action; the other, given under precisely the same conditions, may prove to be practically inert. Lack of uniformity in the crude drug, and absence on the other hand of an adequate method of essay, account for the singular discrepancy. And this serves to show the necessity of standardized remedial agents if we would proceed in the treatment of disease with any assurance of success. It emphasizes, too, the futility of trusting to chance that the extract of a crude drug contains what the practitioner supposes it to contain and what it ought to contain. It is a healthy sign that manufacturers of medicines—some of them at least—are giving serious thought to this matter of standardization. It is cause for gratulation that the largest producers of medical products in the world consider the subject of sufficient importance to make it the basis of an expensive promotion campaign. We have in mind a series of announcements which have been published from time to time in practically the entire medical press of the country, the latest appearing under the significant title, "Who is the Keeper of Your Reputation?" In their plea for greater accuracy in therapeutics Messrs. Parke, Davis & Co. are doing vastly more than to exploit the products of their manufacture—they are rendering a lasting service to medicine. It is to the physician's own interest, and to the interests of his patients, to prescribe standardized preparations; to provide himself with the most trustworthy agents that the market offers. The best is none too good for his purpose.

MEDICAL SOCIETY CALENDAR.

American Medical Association.—Annual meeting in Atlantic City, N. J., June 8 to 11, 1909. Dr. Wm. C. Gorgas, president, Ancon, Panama; Dr. Geo. H. Simmons, secretary, Chicago.

South Dakota Medical Association.—Annual meeting in Aberdeen, October. Dr. S. A. Brown, president, Sioux Falls; Dr. R. D. Alway, secretary, Aberdeen.

Medical Association of the Southwest.—Annual meeting in San Antonio, Texas, November 9, 10, 11. President, Dr. Jabez N. Jackson Kansas City. Secretary, Dr. J. H. Clark, El Reno, Okla.

Medical Society of the Missouri Valley.—Annual meeting in Council Bluffs, Iowa, Sept. 2 and 3. Dr. C. B. Hardin, president, Kansas City, Mo.; Dr. Chas. Wood Fassett, secretary, St. Joseph.

Mississippi Valley Medical Society.—Bnnual meeting in St. Louis, Oct. 12, I3, 14. Dr. Jno. A. Witherspoon, president, Nashville, Tenn.; Dr. H. E. Tuley, secretary, Louisville, Ky.